Quantities that firſt reacht the (ſtill ſgnited) Iron taking fire, by their flame making an Exploſion of the whole, at once blowing up the Recipient, altho the weight of Air incumbent on it was equal to 144 *l.* $\frac{1}{2}$, accounting the Receiver at 3 inches $\frac{1}{2}$ diameter, but was ſomething more, which does ſufficiently allow for the want of height of Mercury. The Gage then ſtanding at 29 $\frac{1}{2}$, inſtead of 30, from which the Calculation is made. The Gunpowder us'd was the common Glas'd ſort; and the weight of the ſix quantities, which remov'd the Recipient, with ſo great a Preſſure incumbent on't, was but 7 grains, each Quantity weighing ſomething more than one. I did not obſerve the Recipient to be broke before it reach'd the Floor. It was thick lin'd with Sulphureous and Nitrous Steams, ſo that the flaſhes of Fire thro the Clowdineſs of the Glaſs ſeem'd very much to reſemble faint Lightnings. The Content of the Receiver was equal to about 25 ounces $\frac{1}{2}$ of Water, allowing for the Bulk of Iron and Pedeſtal.

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## VII. *An Account of an Experiment made* Decemb. *the 26th*, 1704. *To try the Quality of Air, produc'd from Gunpowder, fir'd in* Vacuo Boyliano. *By Mr* Fr. Hauksbee.

UPon making the late Experiment of firing Gunpowder in *Vacuo*, it was hinted as well worthy of tryal, Whether the Factitious Air of fir'd Gunpowder was endu'd with any Quality differing from Common Air. In order to the ſatisfaction of the Query, On *December* the 26th about noon I includ eda Candent Iron in *Vacuo*,

*Vacuo*, the Mercury then in the Gage ſtanding at 29 inches ½: Upon dropping the firſt quantity of Powder, ( by a quantity is to be underſtood ſomething more than a Grain weight ) its Exploſion made a Deſcent of the Mercury in the Gage about an Inch, undulating very little. The ſecond quantity being let fall, the Mercury ſubſided about ¾ of an Inch; and ſo for ſeveral quantities following it deſcended by pretty equal Stages, till it had faln about 6 or 7 Inches; and it was obſerv'd, upon every quantity fir'd, the Undulations of the Mercury increas'd. But after it had ſubſided 6 or 7 Inches from 29 ½, the ſeveral deſcents of it became leſs, very little or nothing exceeding ½ an Inch, altho the Quantities fir'd were equal; but ſtill the Undulations encreas'd, and the Exploſions manifeſtly did ſo too: Till at laſt the Receiver ſeem'd to be in great danger of being blown up by a ſingle Quantity, the Undulations of the Mercury being then augmented to 6 or 7 Inches. Now 26 Quantities or 32 Grains having been fir'd upon the Iron, and the Mercury in the Gage faln to 12 ¾, I diligently attended to obſerve the Gage, which in 7 minutes had aſcended 2 Inches ¾, the next 5 minutes it aroſe but once Inch ¼, and ſo leſs ſucceſſively every 5 minutes, that in an hour and 17 minutes it had attain'd but to 21 Inches, the Iron not being quite cold. At 9 the ſame night I obſerved the Gage, and found the Mercury elevated to 22 Inches ¼, preciſely: next morn at 9 it had attain'd to 22 ½, and ſo continu'd all that day, the Iron then being reduc'd to the temperature of the outward Air. So that from 12 ¾ to 22 ½ ſeems to be the weight or ſpring of heat equal to about ⅓ of an Atmoſphere of Air, which would preſs the Mercury upon the upper part of the Gage, but equal to ſuch a degree of heat as was then contain'd in the Receiver, when the Gage was faln to 12 ¾: The remaining ſpace from 22 ½ to 29 ½ is ſuppos'd to be ſupply'd with factitious Air, and anſwers to about ⅓ part of the Recipients whole Content,

tent, which was equal to 25 ounces ½ of Common Water, allowing for the Iron and Pedeſtal. This Air, produc'd from Gunpowder, I find to be actuated by heat and cold as Common Air: For, holding my warm Hands upon the Receiver, the Mercury in the Gage would immediately deſcend, and riſe again when reduc'd to the temperature of the outward Air. This I repeated ſeveral times, with the like ſucceſs. What more occurs in this Experiment is, Why the Exploſions of the like quantities of Gunpowder ſhould be greater when Reſiſted by Air, than in *Vacuo*, where nothing ſeems to hinder the Extention of their flame.

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## VIII. Georg. Joſeph. Camel. *De Plantis* Philippenſibus *Scandentibus*; *Pars Tertia.* *Ad* Jacobum Petiver, *S. R. S. nuper tranſmiſſa.*

106. *Coculus Piſcatorius Levanticus*, ſeu *Orientalis*, Indis *Lagtan*, *Lactan*, *Libtang*, *Lingtangbaguin*, *Talataloroan*, *Soma* vel *Suma*, *Lanta* & *Tuba*. Univerſas *Indias* plurimis, maximiſque abundare volvulis, omnibus, qui *Indias* adierunt, conſtat: Ad quod, ut opinor, plurimùm facit continua illa, & *Indijs* plerumq; omnibus communis, continuò vernans, & ſemper florens *æſtas*. Hinc in *Luzone*, *Roſa*, *Malva* utraq; *Belmuſcus*, *Tuberoſus*, *Hyacinthus*, *Pancratium*, *Matricaria*, *Gumamela*, *Stramonium*, & nonnullæ arborum, nullo ſervato ordine aut tempore perpetuò florent. *Ruta*, *Majorana*, *Cheyri*, *Betonica*, *Mentha*, *Faba*, *Cicer*, *Braſſica*, *Carduus Benedictus*, & alia *Europæa* nunquam florere viſuntur; ſed ſtatu florem laturo, nova à radice protrudunt germina, ulteriori inſervientia propagationi: Hinc *Balimbin*, *Gamia*, *Papaya*, *Palan-*